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*Date of Application, 6th May, 1890*
*Complete Specification Left, 28th Nov., 1890—Accepted, 14th Feb., 1891*

## PROVISIONAL SPECIFICATION.

### An Improved Asbestos Composition Shadow for Glass and other Furnaces.

JOHN HENRY LEWIS No. 191 High Street Cradley Heath Staffordshire Commission Agent and JOHN SKIDMORE of Brierley Hill in the same County Gentleman do hereby declare the nature of this invention to be as follows :—

Our invention consists of asbestos composition placed upon thin sheet iron crossed with small angle irons from each corner to prevent twisting and strengthening same, it is also bound with channels and fitted with small hooks to keep the composition on the sheet iron and prevent it from falling off, we likewise affix a small iron shelf for the convenience of the workman. The composition we use is a substitute for fire clay bricks, it being a better non-conductor, lighter and gainer to handle, the superflous radient heat from the furnace being almost entirely prevented.

We provide it to work by hanging the shadow upon a cross bar hanging from one flue to the other it is also so arranged to be easily taken down when pot setting, or required, thus doing away with the old method of building up the shadow with fire clay bricks each time, by this means a saving of time and labour is effected.

Dated this 5th day of May 1890.

JOHN HENRY LEWIS.

## COMPLETE SPECIFICATION.

### An Improved Asbestos Composition Shadow for Glass and other Furnaces.

We JOHN HENRY LEWIS of No. 191 High Street Cradley Heath in the County of Stafford Commission Agent and JOHN SKIDMORE of Brierley Hill in the County of Stafford aforesaid Gentleman do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement :—

Our invention consists of an asbestos composition placed upon a thin sheet iron or cast iron plate or plates (*a*) turned over in the solid at right angles on all sides thereof, so as to form a shallow box, and crossed from corner to corner with small angle iron bars (*b*) and interlaced with hoop iron (*c*) across the plate or plates to prevent warping or twisting and thereby strengthening the same and keeping it together. It may also be bound with channels (*d*) riveted on the edges of such plate or plates, and the plate or plates fitted with small hooks (*e*) to keep the composition firm on the sheet or cast iron plate or plates and to prevent it from falling away from the same. A duplicate plate or plates may be used as shewn in Fig. 3 forming a false bottom open at each end for the admission of a current of air.

This composition we use as a substitute for fire clay bricks, it being a better nonconductor of heat, the superfluous radiant heat from the furnace being almost entirely prevented, and the screen or shade being lighter and easier handled removed or replaced.

We provide it to work by means of hooks or eyelets affixed thereto (*f*) the screen or shade hanging upon a cross bar, lever, or other support, running if desirable from one flue to the other. It is also so arranged as to be easily taken down, removed or replaced when pot setting or repairs are required to the furnaces, thus doing away with the old method of building up a screen or shade of fire bricks, and by this means a saving of time and labour is effected.

[*Price 6d.*]

By means of hooks or hinges additional plates of the same description as the one herein described may be added or removed at pleasure (*h*). A small iron shaft for the convenience of the workman may also be affixed (*g*) if required.

Having now particularly described and ascertained the nature of our said invention, and in what manner the same is to be performed, we declare that what we claim is :—

1. The novelty of the application of the asbestos composition affixed to cast or wrought iron plates in the manner before described as a non-conductor of heat, and as a means of preventing the radiation of heat from glass and other furnaces where great heat is required in any process.

2. The utility of the application of such asbestos plate or plates, as a screen or screens, or a shade or shades to furnaces used in the manufacture of glass or other metals where a high temperature is required or a great heat is evolved, as a means of checking such heat to the advantage and physical benefit of the workmen employed in such manufacture.

3. The novelty of the method adopted for keeping such asbestos composition affixed to the plate.

4. The advantage over fire brick screens, or shades, in the lightness of construction, cost, and the easy method of removal or replacement.

Dated this 27th day of November 1890.

JOHN HENRY LEWIS,
191, High Street, Cradley Heath, Staffordshire, Commission Agent.

JOHN SKIDMORE,
Brierley Hill, Staffordshire, Gentleman.

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